

Date: Thu, 31 Mar 94 12:43:24 PST
From: Info-Hams Mailing List and Newsgroup <info-hams@ucsd.edu>
Errors-To: Info-Hams-Errors@UCSD.Edu
Reply-To: Info-Hams@UCSD.Edu
Precedence: Bulk
Subject: Info-Hams Digest V94 #354
To: Info-Hams

Info-Hams Digest Thu, 31 Mar 94 Volume 94 : Issue 354

Today's Topics:

 But Seriously (was Re: New Award Announcement
 CALLBOOK ON INTERNET
 Hams, FCC, Delays, BS walks
 Hot Water 100
How phasing SSB Exciters Work (Was: RF and AF speech processors)
 Kill that intermod!
 Multimode Controllers
 Rec.Radio.Amateur.Antennas activity??
 STOP SENDING HAMS ON USENET CRAP !!!
Talking to seismic packages over a radio link
 The word HAM
 Voice mail on a repeater?
WANTED: List of Cellular Freqs, Channels, etc.

Send Replies or notes for publication to: <Info-Hams@UCSD.Edu>
Send subscription requests to: <Info-Hams-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Info-Hams Digest are available
(by FTP only) from UCSD.Edu in directory "mailarchives/info-hams".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: Wed, 30 Mar 1994 16:18:46 GMT
From: ihnp4.ucsd.edu!usc!howland.reston.ans.net!pipex!sunic!psinntp!psinntp!
arrl.org!ehare@network.ucsd.edu
Subject: But Seriously (was Re: New Award Announcement
To: info-hams@ucsd.edu

Robert Carpenter (rc@cmr.ncsl.NIST.GOV) wrote:

: Deignan and Hare lament the lack of "awards" available to no-code techs.
: Where have they been?

: Two that I can think of are:

: 1) RCC Rag Chewers Club

Well, although I applaud the encouragement of real contacts with real conversations, this just seems too easy on VHF simplex or through a repeater. Keep it around, but we need something more challenging.

: 2) VUCC VHF UHF Century Club 100 grid squares on 6, or 100 on 2 ,
: less on the higher bands. Yes it does require SOME effort, and more
: than a handitalkie, but do we want to dumb-down even the operating awards.

Actually, it requires a LOT of effort with a modest station. The analogy on HF is that with a 100-watt class station and a dipole, one can attain DXCC in a year or so of casual operating. Some have even done it in a single contest weekend, or come real close, at any rate. Perhaps a 100-watt/dipole combination is a "typical" HF modest station. On VHF, a 10-watt station with a ground plane might be more typical. How easy is it to work 100 grids on 2 meters with that combination? Those who want to pursue the award, including Technicians, can do so, but it seems that it is really tailored toward the effective weak-signal station. I don;t propose that we make a no-work award, just one that has enough meaning to make it worthwhile, yet can still be done by the typical VHF station/operator. Do remember that my proposing an idea carries no more weight than anyone else; when it comes to awards, I do NOT represent ARRL other than as a member.

: 3) Various satellite operating awards.

: So, there are a number of operating awards available to the no-code ham
: ... and I might point out that DXCC CAN be achieved by a no-coder on six
: meters, given another good solar cycle.

And for that reason, I propose we keep it. But it is probably an order of magnitude harder than DXCC on 20 meters. I just wonder if we want more operating awards for other types of operation. All in all, it is not an easy task -- striking a balance between achievement and attainability.

BTW -- I changed the subject to be the same as the change chosen by Greg Bullough, just to keep the thread intact. (I liked Greg's idea a lot, BTW BTW.)

73 from ARRL HQ, Ed

--

Ed Hare, KA1CV, ARRL Laboratory, 225 Main, Newington, CT 06111
203-666-1541 ehare@arrl.org

My electronic posts and email do not necessarily represent the policy

of the ARRL, but I can probably get in trouble for them anyway!

Date: Wed, 30 Mar 1994 20:54:45 GMT
From: ihnp4.ucsd.edu!usc!howland.reston.ans.net!math.ohio-state.edu!
magnus.acs.ohio-state.edu!csn!cherokee!walter!dancer.cc.bellcore.com!not-for-
mail@network.ucsd.edu
Subject: CALLBOOK ON INTERNET
To: info-hams@ucsd.edu

In article <CnErML.41F@eskimo.com>, Bill Turner <wrt@eskimo.com> wrote:
>In article <1994Mar28.133651.340@pacs.sunbelt.net>,
>DORR DEPEW <ddepew@CHM.TEC.SC.US> wrote:
>>I have heard that there are several Callbook databases available
>>through the net, but have been unable to locate any. If you have
>>one that you like to use, please let me know by E-Mail. Thanks.
>>N4QIX
>
>I know of one: telnet to callsign.cs.buffalo.edu 2000 and do the usual
>readmes, etc. This is FCC data only, so no furriner info available. If
>anyone knows of others, I'd like to know about 'em too.
>Bill, W7LZP

I've used the buffalo.edu callsign server to also obtain Canadian
ham data.

73s
Bill K2UNK

Date: 31 Mar 94 17:20:12 GMT
From: agate!howland.reston.ans.net!news.cac.psu.edu!news.pop.psu.edu!ctc.com!
news.mic.ucla.edu!nntp.club.cc.cmu.edu!cantaloupe.srv.cs.cmu.edu!dolphin!
ed@ucbvax.berkeley.edu
Subject: Hams, FCC, Delays, BS walks
To: info-hams@ucsd.edu

I am in the same waiting game as others waiting for my 1st call sign.

The FCC (GOV'T as whole) seems to cater to the big groups & big \$\$\$.
(Yeah ok Ed, nothing we already didnt know.)

I am surprised as to how few STRONG electronic techs & engineers there
are anymore. Yes the trade schools are turning grads out in droves, but
I bet that my wife could do more to trouble shoot a digital dashboard
in a GM car than could the majority of Graduated Electronic techs!

And she has only learned from watching me.

I recently looked for some Ham Radio Magazines, but only found 1 after a long drive to a large magazines only shop.

I remember years back, you could go to just about any convenience store or food store and get Popular Electronics, Radio Electronics, Elementary Electronics, CQ, 73, and on some occasions QST.

Those days are gone. I counted no less than 12 different Wrestling mags, 6 music magazines, 5 bridal mags, 6 off road mags, 3 hot rod mags, 4 different bathing suit mags (sim to sports illustrated swimsuit)

Not to pick on you fella, but 1 ham, who didn't know how to hook up a commercial antenna tuner to a long wire! Perhaps this was a problem from how he studied electronics or got his license. Who still goes out and buys something and takes it home, uses it for about a day to get to know it, and then takes it apart? At least a looksee as to how it looks inside, how the cables & connectors go together, what type of components are on the board.

At my job, we have entry level data entry people who make higher salaries than the Trained & Experienced Technicians who do the final test & debugging of the products.

It seems that Technicians & Engineers are a dying/ignored group, bean counters & paper pushers are the cream of the crop.

I heard on the pgh repeater "09" last night the local Red Cross liaison (sp?) conducting a net & asking for 50+ more volunteers for the upcoming Pittsburgh Marathon for communications.

I am able bodied, have a 12 speed mountain bike, an older used but fully functional 2m HT, and a desire to serve the community... but until the N3??? comes in, I am just another spectator.

Does anybody care?

Are hams considered a benefit to the community or just a bunch of ragchewers to keep the fcc busy doing telephone interference tests.

This is my own personal opinion and may not reflect my employers or radio amateurs feelings as a group.

Ed

Date: 31 Mar 94 16:16:13 GMT
From: dog.ee.lbl.gov!agate!blanket.mitre.org!linus.mitre.org!mwvm.mitre.org!
M14494@ucbvax.berkeley.edu
Subject: Hot Water 100
To: info-hams@ucsd.edu

>I bought an old heath kit HW100 for \$150.00 I guess it doesn't matter
>much now, but is this average going price or did I get ripped off.

If the radio is reasonably clean, works ok, and came with the power supply, that's not a bad price. It's not exactly the deal of the century, but you didn't get ripped off, either. If you like HF operation, you will want to upgrade to a more capable radio soon. The good news is that the HW-100 has pretty much bottomed out in value, and with luck, you can use for a year and then sell it for most or all of what you paid for it.

Mike, N4PDY

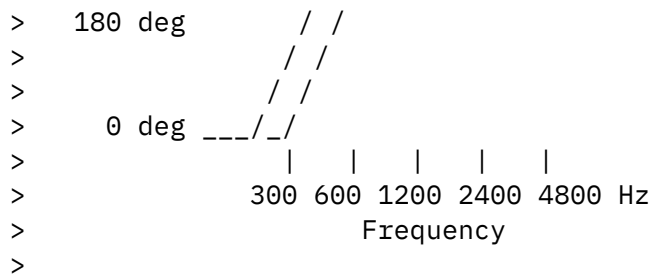
Date: Wed, 30 Mar 1994 19:47:45 GMT
From: ihnp4.ucsd.edu!swrinde!emory!wa4mei!ke4zv!gary@network.ucsd.edu
Subject: How phasing SSB Exciters Work (Was: RF and AF speech processors)
To: info-hams@ucsd.edu

Well at worst I've stirred up an interesting discussion. :-)

In article <CnG3Jt.Htw@srngenprp.sr.hp.com> alanb@sr.hp.com (Alan Bloom) writes:

>The audio phase shift network is the interesting (read difficult) part
>of the system. It must maintain a 90 degree phase difference and
>excellent amplitude matching between the two outputs over something like
>a 10:1 frequency range (300 Hz - 3000 Hz). It generally does that by
>causing each of the two outputs to have a constantly-rising phase shift
>versus frequency characteristic, like thus:

>
>Phase Shift
>
> 720 deg
>
> 540 deg
>
> 360 deg
>
I // // Q
> // //



Now this chart illustrates the problem I've been talking about. As we can see, the difference in delay with frequency is quite marked. Sure the phase delay increases **smoothly** with frequency delta, but the magnitude of the error rapidly climbs with increasing frequency delta. This is our old friend click-boom. From 600 Hz to 2400 Hz delay decreases by almost 20%, or about 0.2 ms. That much delay difference is clearly audible.

If we look at Tom Bruhns' chart for a more complex matrix network:

	phase			filtered	
>freq	phase	error	mag	mag	
>Hz	degrees	degrees	dB	dB	
>200	-193.5	54.6	2.2	-8.4	
>400	-245.6	15.8	0.7	-.5	
>527	-267.6	2.3	.3	0	
>606	-278.8	-3.8	.2	0	
>696	-290.2	-9.2	.1	0	
>800	-301.6	-13.8	0	0	
>1056	-324.5	-19.9	0	-.1	
>1213	-335.9	-20.9	0	0	
>1600	-358.4	-17.8	.2	0	
>2111	-380.4	-6.1	.6	-.1	
>2425	-391.1	3.9	.8	-.5	
>2786	-401.7	17.2	1.1	-1.2	
>3676	-421.5	56.1	1.6	-4.1	

Now this is much better. The ends are horrible of course, but in the region 600-2400 Hz there is only a delay delta of 0.014 ms. That's hardly audible at all to someone with **good** ears. I'd note that this matrix phase shift network is considerably more complex than typical networks found in older phasing type equipment. And as Richard Karlquist noted, that's all for naught anyway unless the IF filtering of the receiver has correspondingly flat phase delay. Good RF filters can be as flat away from their edges as the matrix above, and RF filters work both ways.

Gary

--

Gary Coffman KE4ZV		You make it,		gatech!wa4mei!ke4zv!gary
Destructive Testing Systems		we break it.		uunet!rsiatl!ke4zv!gary
534 Shannon Way		Guaranteed!		emory!kd4nc!ke4zv!gary
Lawrenceville, GA 30244				

Date: Wed, 30 Mar 1994 18:33:18 GMT
From: ihnp4.ucsd.edu!usc!howland.reston.ans.net!EU.net!sunic!psinntp!psinntp!
arrl.org!ehare@network.ucsd.edu
Subject: Kill that intermod!
To: info-hams@ucsd.edu

The ARRL Laboratory wants to start testing the out-of-band intermod performance of VHF FM rigs and publishing the results in our QST Product Reviews. We are already measuring in-band third-order IMD, so the test methods are established. What I would like is some reports on specific out-of-band IMD problems that are being experienced in metro areas, frequencies, locations, etc. Please send the reports to ehare@arrl.org.

Some of the "IMD" problems being reported are probably receiver image problems, so we are also going to measure and report the image rejection. If anyone has reports of image-response interference, I would like to know about that, too.

Thanks,
73 from ARRL HQ, Ed

--

Ed Hare, KA1CV, ARRL Laboratory, 225 Main, Newington, CT 06111
203-666-1541 ehare@arrl.org
My electronic posts and email do not necessarily represent the policy of the ARRL, but I can probably get in trouble for them anyway!

Date: 31 Mar 94 18:07:10 GMT
From: news-mail-gateway@ucsd.edu
Subject: Multimode Controllers
To: info-hams@ucsd.edu

I'm in the market for a multimode controller. The AEA PK-900 looks the best, but it's too expensive for me (I'm looking to spend approx \$300). Right now I'm leaning toward the Kantronics KAM Plus. Does anybody have any experience w/ the Kam Plus? Do you like it? How well does the Hostmaster software work for you (I'd be running the Mac

version, but I'd be interested in feedback on any version--if the windows version is good, the Mac version probably is too). Of course, if anyone thinks I should be looking at a different unit all together, pse let me know.

TNX es 73 de KB2PWM

Date: Wed, 30 Mar 1994 22:14:46 GMT
From: ihnp4.ucsd.edu!usc!howland.reston.ans.net!wupost!gumby!
newsxfer.itd.umich.edu!ncar!csn!col.hp.com!news.dtc.hp.com!hplextra!
hpscit.sc.hp.com!icon!greg@network.ucsd.edu
Subject: Rec.Radio.Amateur.Antennas activity??
To: info-hams@ucsd.edu

Teacherjh (teacherjh@aol.com) wrote:

: >>> I have posted two items to a newsgroup, rec.radio.amateur.antennas,
: >>> but have never ever seen any other activity on that newsgroup. I have
:
: > Perhaps if you changed it to rec.radio.amateur.antenna (singular)
:
: Where would posts posted to the plural go? The bit bucket?
:
: Jose KD1SB
:

No, actually. comp.* plurals go to the bit bucket, but rec.radio.* plurals get bled off to ground. An interesting reaction occurs when someone dumps the a full bit bucket onto the ground, where the comp.* and rec.radio.* plurals mix. I think they call it "packet".

: -)

Greg KD6KGW

: -)

Greg KD6KGW

Date: Wed, 30 Mar 1994 14:44:37
From: ihnp4.ucsd.edu!usc!yeshua.marcam.com!news.kei.com!ssd.intel.com!chnews!
ornews.intel.com!ccm.hf.intel.com!brett_miller@network.ucsd.edu
Subject: STOP SENDING HAMS ON USENET CRAP !!!
To: info-hams@ucsd.edu

In article <764973671snx@bsdihi.ATR.BSO.NL> dihi@bsdihi.ATR.BSO.NL (Dick Hissink)

writes:

>It happens again and again. Every couple of weeks six tremendous large
>files with AMATEURS ON USENET. This times each part from the six even
>three times. I think al the FCC's and PTT's like it, because it keeps
>my modem so busy....

>AMATEURS ON USENET: Those interested can download the latest updated
>version by ftp form server....

>This saves a lot of unnecessary downloadtimes, my phonebill and I must
>say some irritation.
>What do Y'all think of my idea??

I'm fairly sure it is also posted to rec.radio.info There is no need to post
it here - That's what rec.radio.info. is for.

Brett Miller N70LQ brett_miller@ccm.hf.intel.com
Intel Corp.
American Fork, UT

Date: Wed, 30 Mar 1994 22:17:47 GMT
From: ihnp4.ucsd.edu!usc!howland.reston.ans.net!news.cac.psu.edu!ems.psu.edu!
pangaea.ems.psu.edu!sak@network.ucsd.edu
Subject: Talking to seismic packages over a radio link
To: info-hams@ucsd.edu

Hi all, a novice question on radios and radio-modem links.

I have an experiment where a bunch of seismic packages (refteks) are
scattered over the Antarctic ice sheet. They are all within about 40
km of a central site. I would like to interrogate them about their
state-of-health from this central site. I don't need a high-speed
link (I am not downloading seismic data over the radio, just some
relatively small strings of data).

The refteks usually are interrogated by walking up to them, hooking up
a little hand-terminal with an rs-232c connection and sending queries
and getting back answers. This is a full-duplex connection.

I would like to use VHF radios at approx 10W and a good antenna/tower
to get the distance, and get the same functionality, but from the
comfort and luxury of my central hut.

My questions:

1. Are there radio transceivers out there that will operate in full-duplex. i.e. transmit *and* receive at the same time, over two different frequencies?
2. Are there modems out there that will work seamlessly with above radios?
3. Are the modems "intelligent". i.e., I want to be able to say "station 6, tell me foo", and only the modem at station 6 passes on the request to the seismic package, and replies with the response. I can't program the refteks to "know their name" --- the refteks are off-the-shelf.
4. I also need to be able to say "all stations, start recording NOW", without having to cycle through "station 1, start", "station 2, start", and on down the list. This is a timing matter. I want to have all the stations turn on at the same time to record an event.
5. And finally, how much approx for each radio/modem? And any pointers on who sells these things would be much appreciated.
6. Some people have said that I can't expect to just walk into Bob's Radios and walk out with a radio. That there are all sorts of FCC this-n-that before anybody will sell me anything. Is that the case? Please note that this is a *solely* Antarctic project, and will not be used in the US.

I appreciate any and all help you can give me. I am not radio-literate, or modem-litereate, for that matter, so excuse the ignorance of my questions.

Any and all help gratefully accepted.

Cheers, Sridhar.

--

Sridhar Anandakrishnan TEL: (814) 865-7042
Earth System Science Center (814) 863-1700
Penn State University FAX: (814) 865-3191
University Park, PA 16802 email: sak@essc.psu.edu

Date: Wed, 30 Mar 94 17:27:01 -0500

From: ihnp4.ucsd.edu!swrinde!cs.utexas.edu!howland.reston.ans.net!noc.near.net!

news.delphi.com!usenet@network.ucsd.edu
Subject: The word HAM
To: info-hams@ucsd.edu

We have a number of British-born hams here at Intel. They all agree that "ham" is an ancient English idiom for any kind of amateur in any field. That fits perfectly with what I was told by my Elmer in the early '50s. The application of "ham" to actors was for the same reason... amateur actors tend to overact. The origin of the pronunciation is the first syllable of the old-English pronunciation of amateur.

73, KG7BK, CecilMoore@Delphi.Com

Date: 30 Mar 1994 21:21:30 GMT
From: ihnp4.ucsd.edu!usc!nic-nac.CSU.net!charnel.net.csuchico.edu!charnel!olivea!news.bbn.com!news!levin@network.ucsd.edu
Subject: Voice mail on a repeater?
To: info-hams@ucsd.edu

In article <bote.764956634@access1> bote@access1.digex.net (John Boteler) writes:
jherman@uhunix3.uhcc.Hawaii.Edu (Jeffrey Herman) writes:
>Are there any repeaters left in this country that just repeat, including
>no musical tones or beeps when you drop your carrier? I miss the old

Try the 147.180 repeater in Silver Spring, Maryland.

Or 147.045 in Nashua, NH. Or 145.23 in Boston. There are lots around here that don't beep.

In fact that is some sort of religious issue; the people on the home machine (147.045) are beep haters; but there's one in the next town (at 146.73) for those who really like it (plus it has an autopatch)

/JBL

=

Nets: levin@bbn.com | "GO TO JAIL. Go directly to jail. Do not pass
POTS: (617)873-3463 | Go. Do not collect \$200."
KD1ON (@KB4N.NH.USA) | -- Parker Brothers

Date: 30 Mar 1994 22:04:14 GMT
From: ihnp4.ucsd.edu!swrinde!cs.utexas.edu!howland.reston.ans.net!
vixen.cso.uiuc.edu!newsrelay.iastate.edu!hobbes.physics.uiowa.edu!news.uiowa.edu!
panda@network.ucsd.edu
Subject: WANTED: List of Cellular Freqs, Channels, etc.

To: info-hams@ucsd.edu

Mike I will be glad to help. First, I am assuming you require the channelization for the US standard analog system (EAMPS). Secondly that you can use a spreadsheet to generate the complete list from my formula. EAMPS has 832 channels the reverse channel (Mobile TX) is from 824.04 to 848.97 MHz and the Forward channel (Mobile RX) is 869.04 to 893.97 MHz. It should be obvious that this indicates a 45 MHz duplex spacing. The formulas to generate the list are as follows

For Channels 1 to 799:

Reverse Frequency = 825.00 MHz - (.03 * Chan. Number)

Forward Frequency = 870.00 MHz - (.03 * Chan. Number)

For Channels 991 to 1023

Reverse Frequency = 825.00 MHz - (.03 * (1023 - Chan. Number))

Forward Frequency = 870.00 MHz - (.03 * (1023 - Chan. Number))

I know what you are thinking, He said 832 channels yet he has channel 991 to 1023 which are lower in frequency than chan 1 to 799. The reason is because the expansion of cellular has been so great that new frequencies became available a new channel plan was created and well you know the FCC they have trouble counting so we have a screwing channel to frequency assignment. As for the frequency assignment for each cell in your area. Well I do not have access to that type of information and if I did I could not give it you. You can try to contact the cellular carriers in your area but they probably will not give it to you. Good luck

The opinions in this post are mine and my cat's, not my employer's.
scottm@csg.mot.com (Scott F. Migaldi)

Date: Wed, 30 Mar 1994 15:08:33 GMT
From: ihnp4.ucsd.edu!usc!howland.reston.ans.net!pipex!sunic!psinntp!psinntp!arrrl.org!zlau@network.ucsd.edu
To: info-hams@ucsd.edu

References <1994Mar25.155240.899@ke4zv.atl.ga.us>,
<1994Mar26.201156.9246@arrrl.org>, <1994Mar29.160241.20722@ke4zv.atl.ga.us>
Subject : Re: RF and AF speech processors. Was: FT-990 vs TS-850

Gary Coffman (gary@ke4zv.atl.ga.us) wrote:
: In article <1994Mar26.201156.9246@arrrl.org> zlau@arrrl.org (Zack Lau (KH6CP))
writes:

: >SSB crystal filters are designed for steep skirts for good
: >shape factors. This means that without any equalizing networks
: >(which normally double the complexity and send the cost through
: >the roof), the phase response at the passband edges are *terrible*
: >The fact that the center frequency of the crystal filter is much
: >higher just means that the Q of the parts has to be that much
: >better. The mathematics of the phase and amplitude response
: >tradeoffs are unchanged-- the tradeoffs are identical for a
: >3 kHz audio filter and a 3 kHz SSB filter (assuming ideal
: >parts--with real parts its easier at audio...)

: Apples and oranges. The phasing SSB exciter is using an audio
: *phase shift network*, the filter exciter is using a RF filter.
: Now the AF phasing network may be considered a sort of filter,
: but that's not it's designed purpose, and for sure it's not a
: 3 kHz bandpass response. Instead it has to maintain a constant
: 90 degree phase shift across multiple octaves. That's tougher.

Actually, what I was writing about was Gary's misconception that
phase distortion is somehow much easier to deal with if you
move the center frequency higher. Its actually tougher--just try
and build a crystal frequency with good phase characteristics
and a good shape factor. (Or, try and buy one...) Of course, it
is true that you need an audio filter for a phasing exciter, as
there are limits to how broad you can make the phase shift network.
Fortunately, there is no requirement to transmit 60 Hz hum with
perfect fidelity.

I would agree that it isn't necessary for a phasing rig to have low
phase and amplitude distortion--I'm sure that someone could work
really hard and come up with one that sounded awful and still
managed to reject the opposite sideband.

The dark side of DSP? :-)

But, in practice, the easiest way to make one to work well is
to just go ahead and design for low distortion.

FWIW, one of the fanatical AM types showed off his phasing
receiver at Deerfield NH a few years ago... Guess he didn't
notice the distortion Gary is worried about. Come to think
of it, I don't recall hearing complaints about the Sony
2010's audio quality, which also uses audio phase shift
networks. (go through the archives of the shortwave newsgroup?)

--

Zack Lau KH6CP/1 2 way QRP WAS
 8 States on 10 GHz
Internet: zlau@arrl.org 10 grids on 2304 MHz

End of Info-Hams Digest V94 #354
